Complete Summary

GUIDELINE TITLE

Recommendations for the treatment of pediculosis capitis (head lice) in children.

BIBLIOGRAPHIC SOURCE(S)

University of Texas at Austin, School of Nursing, Family Nurse Practitioner Program. Recommendations for the treatment of pediculosis capitis (head lice) in children. Austin (TX): University of Texas at Austin, School of Nursing; 2002 May. 13 p. [41 references]

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

Pediculosis capitis (head lice)

GUIDELINE CATEGORY

Diagnosis
Evaluation
Management
Treatment

CLINICAL SPECIALTY

Family Practice
Nursing
Pediatrics

INTENDED USERS

Advanced Practice Nurses
Nurses
Physician Assistants
Physicians

GUIDELINE OBJECTIVE(S)

To provide health care providers and the general public with a responsible assessment of current screening and treatment approaches to pediculosis capitis (head lice)

TARGET POPULATION

Children, ages 2 to 18 years, with pediculosis capitis (head lice) infestation

INTERVENTIONS AND PRACTICES CONSIDERED

Diagnosis

1. History
2. Physical examination

Treatment

1. Pharmacologic therapy
    - Pyrethroid pediculicides (permethrin and synergized pyrethrin) in the forms of shampoo and mousse or cream rinse (NIX, RID)
    - *Lindane 1% shampoo
    - Combination therapy with permethrin and trimethoprim/sulfamethoxazole (TMP/SMX, Bactrim)
    - Malathion 0.5% lotion (Ovide)
2. Non-pharmacologic therapy
    - Mechanical removal
    - Wet-combing
    - Manual removal
    - Use of coating agents (vaseline, petroleum jelly, mayonnaise)
    - Cutting hair

*Please Note: On March 28, 2003, The Food and Drug Administration (FDA) issued a public health advisory concerning the use of topical formulations of Lindane Lotion and Lindane Shampoo for the treatment of scabies and lice. For more information on this public health advisory, please see the U.S. Food and Drug Administration Center for Drug Evaluation and Research (CDER) Web site.

MAJOR OUTCOMES CONSIDERED

- Elimination of live, crawling lice
- Elimination of viable lice eggs
- Toxicity of drug treatment

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Hand-searches of Published Literature (Primary Sources)
Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

The literature was searched through Medline, CINAHL, PubMed, health related websites (CDC, Harvard School of Public Health, Johns Hopkins, Ohio State University Entomology) and clinical textbooks.

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Category Ia. Evidence obtained from meta-analysis of randomized controlled trials.

Category Ib. Evidence obtained from at least one randomized controlled trial.

Category IIa. Evidence obtained from at least one well designed controlled study without randomization.

Category IIb. Evidence obtained from at least one other type of well designed quasi-experimental study.

Category III. Evidence obtained from well-designed non-experimental descriptive studies such as comparative studies, correlation studies, and case control studies.

Category IV. Evidence obtained from expert committee reports or opinions and/or clinical experience of respected authorities.

METHODS USED TO ANALYZE THE EVIDENCE

Review of Published Meta-Analyses
Systematic Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Not stated

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

Internal Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

A draft of the guideline was developed by a team of Family Nurse Practitioner students and submitted for review to faculty of the Family Nurse Practitioner program. Revisions were made after recommendations were received.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

- A comprehensive history should be completed, including known exposure to head lice, review of daily routine and possible opportunities for transmission, previous head lice infestations and treatments and adverse reactions to treatment.
- A focused, exam of the hair and scalp should be performed, using direct, focused lighting and hand held and/or microscopic magnification as needed. Also exam eyebrows and eyelashes for potential infestation to prevent reoccurrence in hair and scalp.
- Differential diagnosis of pseudo-lice/nits, hatched egg cases without viable lice or nits and other types of parasitic insect infestations should be considered.
- Nonpharmacologic treatments include cutting hair, coating hair with smothering agents (Vaseline, petroleum jelly, mayonnaise) for 8 – 10 hours and mechanical removal of lice and nits with specially designed combs repeated daily until no viable lice or nits are found. The combing maybe augmented by wetting the hair with water, a solution of vinegar and water or coconut or oil olive-based shampoos. It is vital for the clinician to communicate to the patient/caregiver that the most important aspect of this method is the careful, daily inspection of the head and the mechanical removal of the lice and nits. Current evidence demonstrates that

nonpharmacologic therapies require greater time and effort to achieve success than pharmacologic therapies, and present no risk of toxicity.

- Pharmacologic treatment options include mousse, shampoos, cream rinses and lotions containing the following pediculicides in order of effectiveness: malathion 0.5% (Ovide Lotion); pyrethrin 0.33% synergized with 4% piperonyl butoxide and benzyl alcohol (A-200 shampoo); permethrin 1% (NIX cream rinse); pyrethrin 0.33% synergized with 4% piperonyl butoxide (RID shampoo or mousse); and *lindane 1% (lindane shampoo). Application time of each agent is different and important: *lindane 1% - 4 minutes; pyrethrin and permethrin – 10 minutes; malathion 0.5% - 8 to10 hours. If the patient has been treated with one of these medications within the past 6 months (as would be the case if the initial treatment was unsuccessful), resistance to that agent should be suspected and a different agent should be chosen for treatment. Infestations refractory to two treatments each of 2 different agents may be augmented by an oral course of trimethoprim/sulfamethoxazole (TMP/SMX), though this is reserved for extreme, refractory cases. Currently evidence demonstrates that malathion 0.5% presents the highest efficacy and lowest toxicity of the pediculicidal agents, and *lindane 1% offers the least efficacy and highest toxicity risk.
- Items that have come in direct contact with the infected person´s head should be washed in hot, soapy water and dried with heat in order to eliminate the lice and nits. Use of insecticides or extraordinary cleaning measures in the person´s environment are not indicated.
- Follow-up exam/inspection of the patient is recommended 7-10 days after completion of treatment.

*Please Note: On March 28, 2003, The Food and Drug Administration (FDA) issued a public health advisory concerning the use of topical formulations of Lindane Lotion and Lindane Shampoo for the treatment of scabies and lice. For more information on this public health advisory, please see the U.S. Food and Drug Administration Center for Drug Evaluation and Research (CDER) Web site.

CLINICAL ALGORITHM(S)

The guideline contains a clinical algorithm for managing head louse infestations from the Harvard School of Public Health (see Appendix A in the original guideline document).

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The evidence used for this guideline included one meta-analysis of randomized controlled trials, five randomized controlled trials, and two articles from well-designed non-experimental descriptive studies. All other evidence was obtained from expert committee reports or opinions and/or clinical experience of respected authorities.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Decreased morbidity due to head lice, decrease of misdiagnosis of head lice and subsequent overuse of pediculicides and antibiotics, decreased resistance rates to pediculicides in to head lice.

POTENTIAL HARMS

- Pyrethroid pediculicides (permethrin pyrethrin). Side effects to skin include pruritis, erythema, burning, stinging, tingling, numbness, edema and rash.
- *Lindane 1% shampoo. Although lindane has low toxicity in humans with indicated application time of 4 minutes, problems with resistance have lead to increased application times in effort to increase efficacy. This results in increased percutaneous absorption and toxic effects on the central nervous system.
- Combination Therapy with Permethrin and Trimethoprim/Sulfamethoxazole (TMP/SMX, Bactrim): TMP/SMX may cause side effects, allergic or toxic reactions, and may accelerate the emergence or spread of bacterial resistance, thereby diminishing the usefulness of these antibiotics.

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CONTRAINDICATIONS

CONTRAINDICATIONS

Contraindications

- Pyrethroids. Sensitivity to drug, allergy to chrysanthemums or ragweed or acutely inflamed or raw scalp.
- Lindane. Contraindicated in pregnant and nursing mothers and people with known seizure disorders.
- Trimethoprim/sulfamethoxazole (TMP/SMX). Sulfa allergy.

Pregnancy caution

Pyrethroids. Category B

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Getting Better

IOM DOMAIN

Effectiveness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

University of Texas at Austin, School of Nursing, Family Nurse Practitioner Program. Recommendations for the treatment of pediculosis capitis (head lice) in children. Austin (TX): University of Texas at Austin, School of Nursing; 2002 May. 13 p. [41 references]

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2002 May

GUIDELINE DEVELOPER(S)

University of Texas at Austin School of Nursing, Family Nurse Practitioner Program - Academic Institution

SOURCE(S) OF FUNDING

Not stated

GUIDELINE COMMITTEE

Practice Guidelines Committee

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

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FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

GUIDELINE STATUS

This is the current release of this guideline.

An update is not in progress at this time.

GUIDELINE AVAILABILITY

Electronic copies: The following formats are available:

- HTML
- Portable Document Format (PDF)
- ASCII Text

Print copies: Available from the University of Texas at Austin, School of Nursing. 1700 Red River, Austin, Texas, 78701-1499.

AVAILABILITY OF COMPANION DOCUMENTS

None available

PATIENT RESOURCES

None available

NGC STATUS

This NGC summary was completed by ECRI on October 3, 2002. The information was verified by the guideline developer on October 16, 2002.

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